Multilingualism in the Fortification and Treasury archives

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1 Introduction

It is widely known that the Achaemenid Empire was a "Vielvölkerstaat", which implies that many languages were spoken in its territory : Aramaic, Babylonian, Elamite, various Iranian languages (e.g., Old Persian, old East Iranian languages), Lycian, Lydian, Phrygian, Egyptian, etc. Moreover, it is natural that in private matters the native people used their own language. Thousands of Babylonian contracts have been unearthed, as well as many Egyptian papyri.

This study will have a look at multilingualism within the two archives that were discovered in Persepolis : the Fortification Archive and the Treasury Archive[1]. It consists of two main parts. First of all a general outline of multilingualism within the Achaemenid Empire will be presented. The second part focuses on the Fortification and Treasury Archives. Both parts have a similar structure : (1) the use of various languages and (2) knowledge of more than one language on the individual level. The second part will also have a look at some graphic aspects in the Aramaic texts, the relation between Aramaic and Elamite and the alleged alloglottography of Old Persian.

Although the Persepolis Archive contains much more material than the Treasury Archive, it is preferable to include the latter archive in this study, since this enables us to draw a general picture of Persepolitan multilingualism. It will also prove extremely interesting to discuss multilingualism in Persepolis within the broader context of multilingualism in the Achaemenid Empire.

1 It should be emphasized that the NN citations are drawn from copies of Hallock's working transliterations and not from the original documents. The citations from the unpublished Aramaic texts from Persepolis (PFAT) are based on the manuscript of Bowman, but are also checked on the tablets themselves. The manuscript and the texts are being revised for publication by Annalisa Azzoni (Vanderbilt University) ; see also Azzoni, this volume.

2 Multilingualism within the Achaemenid Empire

2.1 Use of many languages within the Achaemenid Empire

When the Achaemenids started their territorial expansion which would eventually lead to the political unification of the entire Ancient Near East, they soon encountered the problems related to the co-existence of many languages within a political and territorial entity. A reference to the language problem can be seen in a slightly damaged ostracon (*TAD* D 7.24 : 14-16). The writer wrote that he had received an official message from the Persian **frataraka-* (a high official), *Rauka-, and had sent it to him "to translate" (*lmprš*), and subsequently to inform Hosea of its contents. Another reference to the language barrier can be read in the work of Diodorus Siculus (XVII.53.4), who writes that Darius III "was most concerned lest some confusion should arise in the battle from the numerous people assembled who differed in speech" (translation : Bradford Welles 1963 : 273). Various answers to the polyglot nature of the Achaemenid Empire were introduced in the administration of the newly conquered areas (Porten 1968 : 56-57 ; Stolper 1984 : 299).

An answer was the propagation of a language, which could be used as administrative language all over the Empire. This would certainly help the creation and development of a well-functioning administration, which was needed for, e.g., a good collection of the various taxes.

The language chosen for was Aramaic, which was already the diplomatic lingua franca since the days of Assyrian rule. It became the favourite administrative language and was used by the Achaemenid administration throughout the empire : Aramaic texts were discovered in Daskyleion, Sardes, Egypt, Babylonia, Persepolis, Bactria, etc. The use of Aramaic and of interpreters solved the problems mentioned above.

The widespread use of Aramaic did not mean, however, that Aramaic replaced all other languages as administrative language (Briant 1996 : 525-526) and that it became the sole solution for the language problems mentioned above. Royal decrees and inscriptions were sent all over the empire, but were copied there in the region's own language. Proof of this are the fragments of a Babylonian version of the Bīsītūn Inscription found in Babylon and the royal order mentioned in Esther 3,12 ("Everything Haman commanded was written to the king's satraps and governors who were in every province and to the officials of every people, province by province according to its script and people by people according to its language"). Even the contacts between the satrapal administration and the local administration could be arranged in the local language : a good example is the correspondence between Pherendates, the satrap of Egypt, and the authorities of the temple of Chnum in Elephantine (492 B.C.), which is preserved in some letters. This correspondence indicates that Aramaic was not always used as administrative language. The letters from Pherendates' administration were originally written in Aramaic, translated in Egyptian and accordingly written on papyrus. The reply from the priests, however, was recorded immediately in Egyptian. This is shown by the formulaic end of one of the letters belonging to this archive (P. Berl. 13540), on which more will be said below.

The latter examples immediately make clear that the central authority of the Empire itself and/or of each satrapy had translators among their staff (Dandamayev 1983 : 73).

These were officials who could translate orders from Persian (or Aramaic) into the local vernacular.

Summarizing the following attempts to counter the language problem were (1) the choice of Aramaic as an administrative language, (2) the translation into other languages of royal inscriptions and decrees and (3) the use of interpreters.

2.2 Knowledge of more languages on an individual level

If multilingualism, in the sense of the peaceful co-existence of various linguistic groups next to each other, could survive without one language (e.g., Aramaic) simply ousting the rest, the various languages had to have contact with each other in a comprehensible way for both parties. This necessitated the existence of a class of people who were in the centre of these linguistic contacts.

These people were the interpreters, individuals who could speak and/or write at least two different languages or scripts. Xenophon (*Anab*. I.2.17 and I.8.12) mentions that there were many interpreters in the royal army. In all cases where the need for knowledge of more than one language could emerge interpreters were needed : royal receptions and diplomacy, but also the various bureaus, where administrative documents were drafted.

Despite the seemingly great number of interpreters active in the Achaemenid administration the sources only mention very few examples of people speaking various languages. The most famous example must be Themistocles, who spoke both Greek and Persian. Another person speaking both Greek and Persian was Histiaeus of Miletus (Briant 1996 : 524-525).

The Babylonian texts too may shed some light on this issue. In a Babylonian tablet (Amherst 258), where various Iranian officials are mentioned, two of them (*Ṛtapāta- and *Vištāna-, the satrap of Babylonia and Ebir Nāri) are accompanied by their *sepīru*, all of whom have a Babylonian name (Bēl-ittannu, Libluṭ and Marduka). In *BE* 9 48 *Rauxšnapāta-, a *sepīru* of the high Persian official *Ṛtarēva-[2], is mentioned. According to scholarly opinion (Kümmel 1979 : 136, n. 193 ; McEwan 1981 : 30 and 153 ; Dandamayev 1983 : 68-76 ; Stolper 1985 : 22 ; Bongenaar 1997 : 46 ; *CAD* S, p. 225-226) this expression has two meanings : (1) "scribe writing alphabetic script" (next to cuneiform) and (2) an administrative functionary (e.g., "cashier"). It is, however, more plausible to assume that both meanings may easily be merged leading to a general meaning "official competent both in alphabetic and cuneiform script" (Tadmor 1982 : 453 ; Pearce 1999 : 366). Their administrative importance was in all likelihood a logical consequence of their capabilities as multilingual scribes. Accordingly the Akkadian expression for "interpreter" was thus *sepīru*[3].

This definition requires that *sepīru* were in all likelihood at least bilingual (e.g., Babylonian – Aramaic). If the Persians mentioned in the tablet Amherst 258 needed *sepīru* to arrange their contacts with the local population, then they did not know Babylonian

2 This person is identical with Gk. Ἀρτάριος, the brother of Artaxerxes I and satrap of Babylonia during the reign of Artaxerxes I (Stolper 1985 : 90-91 ; Schmitt 2006 : 137-138).

3 Lewis (1994 : 26) mentions the possibility that *sepīru* was an office with no writing functions. Yet this is unlikely, since the Babylonian evidence clearly connects *sepīru* with writing (*CAD* S, 225 ; McGinnis 1995 : 123 ; Bongenaar 1997 : 59).

very well (Briant 1996 : 526). In this case the interpreters knew both Old Persian and Babylonian. Briant, however, offers two alternative solutions, of which only the first one can actually be taken into account : (1) the Persians spoke Persian because of their high-rank position, (2) the expression *sepīru* concentrates here on their administrative function.

Scribes, both mono- and multilingual, were active in all administrative departments. Aramaic, Babylonian and Elamite texts mention the "scribes of the treasury" : *spry ʾwṣrʾ* (*TAD* B 4.4 : 12), *LÚṭupšarru ša bīt kāṣirānu* (Camb. 384 : 15-16), *teppir kapniškima*[4] (PF 1947 : 17 ; NN 2356 : 12-15, etc.). Other examples are the "scribes of the provincial district (smaller than a satrapy)" (Ar. *spry mdynt'* : *TAD* A 6.1 : 1, 6), which are most likely to be identified with the "scribes of the nome" (Eg. *sš tš*[5] : CG 50086 : X+8 ; P. Ryl. 9 vii 1, xvi 2, 3 and xvii 13 ; P. Wien D10150 : 3, D10152 : 1, 2 ; Spiegelberg 1904 : 48. Cf. Porten 1996 : 113 and n. 5 ; Vittmann 1998 : 412) or the "scribes of the army" (Bab. *sepīru ša ūqu*[6] : *BE* 10 102 : 7 ; *PBS* 2/1 34 : 4, 9 ; *UCP* 9 276 : 19, etc. ; Eg. *sš mšʿ* : Spiegelberg 1904 : 47). Especially the Babylonian sources have revealed many departments where scribes could be active (cf. *CAD* S, p. 225-226 for more examples).

3 Multilingualism in the Fortification Archive

Already for a long time scholars agree on the multilinguistic aspect of the Persepolis Fortification Archive. As Lewis (1994 : 21) put it, the Archive and the administration it reflects is a "complex linguistic phenomenon, even at the level of script. At the level of speech, to judge by the variety of ethnics attested for work-groups, the position will have even been worse".

The study of multilingualism in the Fortification Archive is made difficult by the administrative and practical nature of the texts belonging to the archive. These texts do not bother about linguistic problems and only very few indications on multilingualism are preserved in it. The study on multilingualism in the Fortification Archive is divided in two categories : (1) use of various languages in the Archive and (2) use and knowledge of more than one language on the individual level.

3.1 Use of various languages in the Archive

The Fortification Archive is not a purely Elamite archive, although the texts recorded in Elamite make up the major part of the texts of the archive (4,845 texts ; cf. Henkelman 2006 : 47). The second largest group is the one containing Aramaic texts (*ca.* 700 texts ; Stolper 1984 : 300). Other tablets are recorded in Babylonian, Phrygian, Greek and Old Persian (cf. Jones & Stolper, this volume). This variety of languages reflects the Persepolitan

4 The rations of the scribes of the treasury are higher (9 BAR) than those of other scribes. This may indicate a higher rank for these scribes.

5 The demotic texts make clear that these scribes were associated with land registration and taxation.

6 These scribes served as interpreters for the Achaemenid soldiers who were stationed in Babylonia (Dandamayev 1983 : 73). In the Murašû Archive a *ḫaṭru* of the scribes of the army is attested (Stolper 1985 : 76, 93).

society, which must have been a mixture of languages, if one takes into account the workmen of various ethnic affiliation mentioned in the Archive : Assyrians, Babylonians, Lycians, Egyptians, Arabs, etc.

As already indicated the second largest group are the Aramaic texts. These texts, the publication of which is being prepared by Annalisa Azzoni, mention some persons and places also attested in the Elamite texts, have the same sealing practices and deal with the same topics (Stolper 1984 : 306 ; Henkelman 2006 : 55). Also the same administrative language and structure is used (e.g., PN *hiše* = PN *šmh* ; date is situated at the end of the text), albeit in Aramaic and Elamite garb. The main difference between both text groups are the month names : Semitic ones in the Aramaic texts, Old Persian and Elamite ones in the Elamite texts.

The Babylonian tablet is quite exceptional (Stolper 1984 : 304), because its content does not correspond with the content of the Archive, contrary to the Greek text, which fits perfectly in the Archive. The text is a typically Babylonian slave sale with the judicial formulas that are frequently used in Babylonia proper. It is probably written by Babylonian permanent residents [7] in Persepolis, who recorded their own transactions in a Babylonian form (Stolper 1984 : 309).

The Greek text (οἶνος δύο μάρις Τέβητ), written in Ionic of about 500 B.C., deals with wine and the two seal impressions, indicating the person who issued the wine and the person who received it, make clear that it is an actual record of a transaction. Apparently it is written by someone who was active in the Persepolis administration and who knew that the addressee would be able to understand what he wrote (Lewis 1977 : 12-13 and n. 55 ; Stolper 1984 : 304). Interestingly this text differs with the Elamite texts, but corresponds with the Aramaic ones in its choice of month name : a Semitic name is used, not an Old Persian one. That there were many Greeks working in Persepolis is made clear by both the classical sources and the Elamite texts themselves : the physicians Demokedes of Kroton (Darius I ; Hdt. III.125.1, 129-137), Apollonides of Kos (Artaxerxes I ; Ktesias *frag.* 42), Ktesias of Knidos (Artaxerxes II) and Polykritos of Mende (Artaxerxes II ; Plut. *Art.* 21.3) were active at the royal court. In an Achaemenid royal inscription from Susa Greek people appear as transporters of cedar (DSf 30-35) and as stone-cutters (*ibid.* 48). Greeks also left their graffiti in Persepolis (Pugliese Caratelli 1966 : 31-34 ; Lewis 1977 : 13). Finally, the Persepolis Fortification Texts mention Greek workers, e.g., in PF 1224 : 8-9, and 2072 : 84-85. It may be assumed that these Greeks, esp. those living at the court, at least picked up a little Persian.

The Phrygian text is unfortunately damaged and hardly comprehensible. The last word is an Old Persian month name, which points to a provenience from Persia proper (Stolper 1984 : 304). Another word is *makeres*, which D'jakonov et Neroznak (1985 : 121) translate as "workers". It is remarkable that no Phrygian people are mentioned in the Achaemenid Royal Inscriptions and in the texts from Persepolis, although other people from Asia Minor (e.g., Lydians, Carians, Lycians) do appear in the texts.

The Old Persian text was discovered recently and was recently edited and discussed (Stolper & Tavernier 2007). It suffices to mention that it is an administrative text, whose content perfectly fits in the Archive.

7 More on Babylonian workers can be found in Giovinazzo (1989 : 201-202).

3.2 Use and knowledge of more than one language on the individual level

Information on this aspect is hardly available because of the nature of the archive. Yet there are some features which may help the researcher to conduct this study : (1) information on the scribes in the archive, (2) the so-called alloglottography of Old Persian and (3) graphic aspects.

■ *The scribes in Persepolis* — Basically there are two types of scribes in the Archive : scribes using the Aramaic writing system and those using the cuneiform writing system.

The first group consists of the so-called *teppir*, which are always characterized as KUŠ *ukku*, "(writing) on parchment" or as *Papilip*, "Babylonian". Sometimes the combination is used : *(appa) Papilip* KUŠ *ukku*. These scribes write in alphabetic script on parchment (most likely in Aramaic), but unfortunately these texts are not preserved (Hinz 1971 : 308 ; Hallock 1973a : 322 ; Lewis 1977 : 9 and 1994 : 25 ; Stolper 1984 : 305 ; Giovinazzo 1989 : 202 ; Henkelman 2006 : 55). They had a relatively high rank within the Persepolitan administration (Giovinazzo 1989 : 202-203 ; Tavernier, 2007b : 59-64). It is therefore quite plausible to consider *teppir* as the Elamite translation of Akk. *sepīru*. In one text a scribe of the Egyptians (*teppir Muzripena*) is mentioned. His name, Harkipi, is probably Egyptian, which may indicate that he was an Egyptian person writing in demotic script. Alternatively, but less probably he may have been a non-Egyptian scribe who was attached to the Egyptian work force. The *teppir* whose names are preserved nearly all have Iranian names : *[ ]āta- (PF 1947 : 27), *[ ]pāθra- (PF 1947 : 21), *Bagēna- (PF 1561 : 3-4), *Hiθagṛzi- (PF 1808 : 4-6), *Nitita- (NN 2335 : 40-41). Nukudda (NN 2335 : 40-41) could be Iranian as well as Elamite. Having in mind the methodological problems related to names and ethnicity this does not allow the scholar to draw immediate conclusions. Still it is acceptable, although far from certain, that they were Iranians who had learned to read and write Aramaic. This means that Iranians could be trained in learning especially Aramaic, the administrative language of the Achaemenid Empire. It might very well be that knowledge of Aramaic was a condition *sine qua non* to reach a certain level within the Achaemenid administrative hierarchy. The writer of the Babylonian text, Marduk-nāṣir[8], may have been a *teppir*, who, as a matter of fact, were more numerous than their colleagues who wrote in cuneiform (Hallock 1973a : 322, *pace* Hinz 1971 : 308).

Doubtlessly the *teppir* must have been bi- or multilingual. Their work was situated in the area of contact between cuneiform scripts and languages on the one hand and alphabetic scripts and languages on the other hand.

The second group are the scribes writing in cuneiform. They are mentioned as scribes of tablets (PN *talliš*). Only 206 Fortification and 29 Treasury texts mention the name of the scribe (table 1). 4 texts mention *puhu Paršipe tuppime sapi(man)pa*, "Persian boys who are copying texts" (PF 0871 : 4-5, 1137 : 5-6 ; NN 1485 : 5-6 ; 1588 : 4). They occur in work groups of 16 (PF 1137 ; NN 1485, if at least Hallock's [Nachlass] restoration of NN 1485 is correct) or 29 boys (PF 0871 ; NN 1588). The high amount of rations they receive (4,5 BAR of grain ; 1 QA of sour wine) makes clear that they were high-ranked within the Persepolis hierarchy (Lewis 1977 : 9, n. 37 and 1994 : 26).

8 Probably not the same person as [HAL]Mar-du-kán-na-sir, who occurs in PT 25 : 9-10 (Stolper 1984 : 303).

The question whether these scribes were multilingual too cannot be answered without having a look at the manner how decrees and administrative instructions were made up and how translational problems were tackled within this process. In other words : what process took place from the idea in a director's mind to the actual Elamite or Aramaic tablet ?

As Achaemenid officials were not really concerned with this issue it should not surprise that the great majority of the texts does not give information on it. Fortunately, however, there are some texts containing some stages of the process. These texts are concluded by one or more subscripts. There can be no more than four of these subscripts. Most of the texts are letter orders (category T ; 119 texts), but there are also 62 H-texts ("Receipts by officials"), 5 C4-texts ("Small cattle as tax"), 5 P-texts ("Daily rations"), 4 C6-texts ("Other deposits"), 3 C2-texts ("Accounting balances"), 2 E-texts ("Utilization"), 2 G-texts ("Providing of provisions"), 1 D-text ("General receipts"), 1 K1-text ("Rations for individuals with religious functions"), 1 L2-text ("Regular monthly rations with *galma*") and 1 M-text ("Special rations").

The most frequent versions of the four formulas are :

(1) *halmi (hi/i) lika* (= formula H)
(2) PN_1 *talliš* (= formula T)
(3) *battikamaš* PN *lišta* (= formula P)
(4) *tumme* PN-*mar tušta* (= formula D).

Lewis (1977 : 10-11, n. 38) believes that formula P comes in later than D. In his eyes the first attestation of P dates from Dar 18. In reality, however, P is already attested in a text from Dar 15 (507-506 B.C.). Formula D also appears from the fifteenth year onwards, but lasts much longer than P. The latest attestation of P dates from Dar 32 (490-489), the latest attestation of D is Xer 20 (466-465 B.C.). Both formulas existed next to each other during the reign of Darius, but apparently the officials considered it unnecessary to use P during the reign of Xerxes. Perhaps the activities represented by both formulas were combined and became the responsibility of one person.

Formula H is not necessarily situated in the first place. The sequence of T, P and D, however is always the same.

Now let us turn to the meanings of the subscripts. On the two first formulas there is unanimity among the authors. The first one means "The/this authorization has been delivered", while the second one simply means "PN wrote (the text)". Elamite *halmi* basically means "seal", as is made clear by its occurrences in PF 2067 and PF 2068. It may, however, also mean "sealed document" and even "letter of authorization" [9] (Cameron 1948 : 53-54 ; Hallock 1969 : 131 ; ElW 604 ; Vallat 1994 : 269 ; Henkelman 2006 : 92). This is particularly true with regard to the Q-texts ("Travel rations"), where it is often said that the traveller carried a *halmi* from PN or the king (*halmi* PN-*na/sunkina kutiš*). With this

9 In that sense it has much in common with Akk. *kunukku*, which also means "seal ; sealed document ; legal or administrative document ; letter" (*CAD* K, 547 ; cf. Vallat 1994 : 269, n. 57).

letter or *viaticum* (OP **viyātika-*[10], El. mi-ia-tuk-ka$_4$-(um)[11] and mi-ia-tuk-kaš[12]) the traveller could get his food rations at each station he passed. This *viaticum* was most likely written in Aramaic and impressed with a seal of the authorizing official (Cameron 1948 : 54 ; Vallat 1994 : 269 ; Henkelman 2006 : 92).

More semantic problems arise when one looks at the formulas P and D. Various scholars have already tried to find the precise meaning of the two most difficult words of these formulas and thus be able to reconstruct the production process of an instruction. The two words are *battikamaš* (El. bat-ti-ka$_4$-ma[13] and bat-ti-ka$_4$-maš[14] ; Ar. *ptgm*[15]) and *tumme* (spelled du-me[16] and du-um-me[17]). Concerning *battikamaš* Cameron (1942 : 216 and 1948 : 96-97 and 209) believed its meaning to be "translated, interpreted". This idea was given up, however, when Henning (*apud* Gershevitch 1951-52 : 142, n. 1 ; also Hinz 1975 : 186 and Tavernier 2007a : 410 [4.4.3.13]) convincingly argued that *battikamaš* is actually Iranian **patigāma-*, "message, report, order".

The second expression, *tumme*, has aroused more discussion among the scholars. According to Cameron (1948 : 84) *tumme* is the factual noun of the verb *tu-*, "to receive" and thus means "receipt". Based on contextual evidence[18] Hallock (1969 : 51 ; also Hinz 1971 : 310) has assumed a meaning "instructions, information, order". Another proposal has been put forward by Lewis (1977 : 10-11, n. 38) : *tumme* is a loanword from Akk. *ṭēmu* and Ar. *ṭʿm*, "order, instruction".

Because of the explicit presence of the vowel /u/ in *tumme*, Stolper (1984 : 305, n. 17) has serious doubts on the latter proposal. In his opinion the views of Cameron and Hallock can be reconciled : *tumme* is indeed a derivation from *tu-*, "to receive", but its precise meaning is not "receipt", but "duplicate, copy ; draft" (like Akk. *miḫru*, "copy", from *maḫāru*, "to receive"). This idea is refined by Hinz and Koch (ElW 360 and 384), who hold that "duplicate, copy" is expressed by ^{AŠ}sa-ap.KI-MIN (cf. Hallock 1950 : 244). Accordingly *tumme* means "draft". Whatever its precise meaning is, it is certain that on the large majority of occasions the scribe (PN$_1$) received the *tumme* (Lewis 1977 : 10-11, n. 38), despite Hallock's (1969 : 51-52) and Hinz's (1971 : 310-311) views that, when formulas

10 Hinz 1973 : 40 and 1975 : 268 ; Schmitt 1974 : 104 ; Tavernier 2007a : 410-411 (4.4.3.19).

11 PF 1306 : 5-6, PF 1329 : 6-7, PF 1346 : 7-8, PF 1412 : 7, PF 1424 : 8, PF 1444 : 8-9, PF 1554 : 6, etc. in PFT ; NN 0305 : 5-6, NN 0447 : 9-10, NN 0686 : 5-6, etc. in NN.

12 PF 1307 : 12-13, PF 1308 : 4-5, PF 1451 : 4-5, PF 1453 : 6-7, PF 1474 : 9, PF 1499 : 7, PF 1512 : 7-8, PF 1518 : 9, PF 1519 : 8, PF 1520 : 7, PF 1538 : 9 ; NN 1424 : 4, NN 1519 : 10, NN 2396 : 14, NN 2403 : 6, NN 2582 : 6.

13 PF 0659 : 8-9.

14 *AchHist* XIII 103-104 : 19, 107-108 : 22 ; PF 0654 : 10-11, PF 0672 : 13, PF 1795 : 13, etc. in PFT and NN.

15 *TAD* A 6.8 : 3, 6.10 : 9 ; *TAD* B 8.8 : 2, 3 ; *TAD* D 1.28 : 5, 1.32 : 15, 7.39 : 8.

16 PF 0675 : 11, PF 0676 : 14, PF 1788 : 11, PF 1791 : 29, etc. in PF and NN ; PT 1 : 22, 13 : 31-32, 15 : 28, etc. in PT.

17 PF 0670 : 10-11, 671 : 12 ; 673 : 12, 678 : 13, 1789 : 13, 1790 : 26, 1794 : 11, 1798 : 19, 1799 : 18, 1800 : 21, 1801 : 16, etc. in PF and NN ; PT 12 : 26, 14 : 22, etc. in PT.

18 The person who issues the *tumme* must be attached to the sender and not to the addressee, which would be the logical result if one assumes the meaning "receipt" for *tumme*.

D and P occur together, they have the same subject (i.e. that the subject of P received the *tumme*).

The views described above have led to the following translations for the complete subscript :

(1) Cameron : The/this authorization has been delivered. PN_1 inscribed (it), after it had been interpreted ; by PN_2 it was given. The receipt from PN_3 PN_2 received.

(2) Hallock : The/this authorization has been delivered. PN_1 wrote (the text). PN_2 communicated the message. PN_2 received the order from PN_3.

(3) Hinz : The/this authorization has been delivered. PN_1 had the tablet written. PN_2 has communicated this authentication order. PN_2 has received the order from PN_3.

(4) Stolper : The/this authorization has been delivered. PN_1 wrote (the text). PN_2 delivered the message. PN_3 (or PN_1) received the copy (or draft).

(5) Hinz and Koch : PN_1 wrote (this text). PN_2 has communicated the message. PN_2 received its draft from PN_3.

Some alternative formulas are also attested : in PT 4 the only relevant formula is **Dārayauš sunkir ap šeraš*, "the king commanded (it) to them". This formula also occurs in PT 5 (**Dārayauš šerašta*) and 6-8 (*sunkir šerašta* ; cf. Cameron 1948 : 91). PT 6-8 mention Dātavahyah- as scribe. This formula is clearly the equivalent of formula P. A second alternative phrase is only attested once (PF 1790 : 27-28 ; Dar 19) and replaces formula P, as the same text also contains formula D (Lewis 1977 : 10-11, n. 38) : *hi tupaka* PN *turnaš*, "PN knew about this". In PF 0317 the text goes as follows : *halmi*[19] PN *tallišta*, "PN wrote the letter of authorization". Nevertheless it is equally possible and rather probable that the scribe forgot to write (*hi*)[20] *lika* between *halmi* and the personal name. The original sentence was *halmi (hi) lika*.

As already mentioned, 29 tablets of the Treasury Archive name the scribe. All of them belong to the letter-type[21]. Various tablets[22], however, have formulas H and D, but apparently skipped formula T. Possibly people started to combine the activities of D and T. In all cases the person named in D is *Bagabuxša-. Finally some tablets only have formula H[23]. Again all these texts belong to the letter-type.

The ethnic affiliation of the personal names mentioned in these formulas may be useful for this study. Nevertheless some names should not be included in the discussion. *(H)uvanvanta- (El. Mannunda ; attested 24 times ; Dar 18-26), who always occurs in formula P, is the personal steward of *Farnaka- (Lewis 1977 : 11 and n. 40 ; Stolper 1984 :

19 The *halmi* mentioned is a letter of authorization from *Čiçavauš (Ziššawiš), as is indicated in lines 1-2.

20 Mostly the subscript is *halmi hi lika*, but in four texts *hi* is omitted (PF 1790, 1799-1800 ; NN 1775).

21 The texts on the Treasury Tablets can be divided in two types : letters and memoranda (Cameron 1948 : 24-25).

22 PT 37-38, 41-42a, 47-48, 54, 56-57, 59, 1957-5, 1963-2, 1963-10, 1963-11, 1963-12, 14. PT 49 had probably hal[-mi] at the end of the last line. The scribe wanted to add more formulas but could not do this because of a lack of space (Cameron 1948 : 160).

23 PT 18, 33, 46, 63, 1963-9.

305, n. 17 ; Vallat 1994 : 268) and not a functionary in the administration. According to Stolper (l.c.) El. ^{HAL}Man-nu-ka$_4$ is a hypocoristic of this name and thus denotes the same person. This, however, is far from sure, since the latter spelling may also render Ir. *Vanuka-, "loving" (Schmitt 1973 : 18-19 ; Mayrhofer 1973 : 8.954). Stolper also excludes the people occurring in the subscripts of letters from *Ṛtavardiya- (in casu *Çŭtēča- and Hiš[ ]mana)[24].

The people who *talliš* the document mostly have Old Iranian names (Vallat 1994 : 268 ; cf. table 1). Of the 62 recognizable names 53 are Old Iranian and only 9 are Elamite. Not a single name is Babylonian or West Semitic. It may be assumed that these people were particularly busy with Elamite cuneiform writings.

The names occurring in formula P are nearly all Iranian : Bagabuxša- (attested once ; Dar 21), *Buxtēča- (attested once ; no date), *Dātēna- (attested three times ; Dar 26), *Kāmēča- (attested 41 times ; Dar 17-27), *Nitanya- (attested 4 times ; Dar 25-32), *Vanuka- (attested once ; Dar 18), *Varāza- (attested 11 times ; Dar 18-21) and *Vīrina- (attested once ; Dar 28). There is one Elamite name (Humpanunu, attested once ; Dar 15) and one Babylonian name (Ribaya[25], attested twice ; Dar 15).

Finally and remarkably the names occurring in formula D are Iranian or Semitic (Babylonian or West Semitic ; Stolper 1984 : 305 ; Vallat 1994 : 268). In the Fortification Archive the D formulas mention 8 Iranian names, that are attested 32 times : *Bujina- (attested once ; Dar 19), Dātavahyah- (attested once ; Dar 24), *Dātēna- (attested once ; Dar 20), *Kāmēča- (attested once ; Dar 17), *Kapārša- (attested once ; Dar 17), *Nitanya- (attested once ; Dar 20), *Varāza- (attested 8 times ; Dar 18-21) and *Yauna-[26] (attested 18 times ; Dar 15 - Xer 4). Nine Babylonian or West Semitic names are cited : Aplaya (attested 6 times ; Dar 21-24), Barīk-Tameš (attested 2 times ; Dar 25), Bēl-iddin (attested 2 times ; Dar 22), Bēl-ittannu (attested once ; Dar 22), Itti-Bēl (attested 32 times ; Dar 22-33), Laqip (attested 2 times ; Dar 23), Nanâ-iddin (attested 17 times ; Dar 16-21), Ribaya (attested 14 times ; Dar 17-25) and Taʿlaya (attested 2 times ; Dar 22-25). They occur 78 times. Finally there are two Elamite names (Akkušuna and Puruna), occurring two times.

24 According to Vallat more people mentioned in formula P were in private service of either *Farnaka- (*(H)uvanvanta- and *Varāza-) or *Čiçavauš (*Kāmēča-, *Nitanya- and Barīk-Tameš). He even notices a chronological order in the aides of *Čiçavauš : the two latter names succeeded *Kāmēča-. Two objections should be made, however. First of all Vallat's chronological order is inaccurate : *Kāmēča- is attested in formula P from Dar 17 (PF 1812, etc.) through Dar 27 (NN 0685), while *Nitanya- occurs from Dar 25 (PF 1827 ; NN 0087) through Dar 32 (PT 9). Secondly Barīk-Tameš does not appear in formula P, but only in formula D (PF 1827 ; NN 0087).

25 Mayrhofer (1973 : 8.1434) prefers this name, which is spelled ^{HAL}Ri-ba-a, ^{HAL}Ri-ba-ia and ^{HAL}Ri-be-a in Elamite, to be Iranian. Hinz reconstructs *Raibaya-, "cunning" (NP *rēv*). Nonetheless the name is certainly Babylonian (Delaunay 1976 : 25 ; Lipiński 1977 : 109 ; Stolper 1984 : 305, n. 20 ; Tavernier 2007a : 532-533 [5.5.1.51]), cf. the Neo-Ass. personal name Ri-ba-a-a. *Ribīš, spelled ^{HAL}Ri-pi-iš, is a contraction of Ribaya.

26 Whose name means "homestead" and not "Greek", as Lewis (1977 : 12 ; also Stolper 1984 : 305) believes. According to Lewis the name points to a Greek ethnicity of this person.

A shift from Babylonian to Iranian names is, however, seen in the Treasury Archive. In the latter text corpus, however, 6 Iranian names (*Aura- [attested once ; Xer 16], Bagabuxša-[27] [attested 3 times ; Xer 20], *Haftiš [attested once ; Xer 4], *Hiθiš [attested once ; Xer 4], *Ṛtaxaya- [attested 10 times ; Dar 32 – Xer 6] and *Saka- [attested once ; Xer 3]) are attested 16 times against two Babylonian names (Marduka and Mušmardu), each attested once. Since it would be strange that Iranians would adopt Babylonian names in Fārs, one may safely assume that the bearers of Babylonian names are really Babylonians (Stolper 1984 : 306 ; also Lewis 1994 : 25). Analogically one could assume that the individuals with Iranian names are Persians, but that is not sure : Babylonians may have adopted an Iranian name in order to have a better chance for an administrative career. The shift from Babylonian to Iranian names may thus be explained in two ways : either more Babylonians assumed Iranian names for the reason mentioned above, or more and more Iranians learned to read and write Aramaic. In any case it is certain that the officials mentioned in formula D had to be able to read and write Aramaic, because of the clear presence of so many Babylonians. In all likelihood these people had the title of *teppir*.

More recently Vallat (1994 : 268-270 and 1997) has brought up an alternative view on how the formulas should be interpreted. Contrary to his predecessors he pays much attention to formula H in order to grasp the entire system and production process of an order. If the *halmi* was recorded in Aramaic it means that it was written by Babylonian scribes. Vallat considers this *halmi* to be the original Aramaic document, drafted by the Babylonian scribes. This document was sent to the addressee. An Aramaic copy of the *halmi*, the *tumme*, was drafted, tied to the Elamite tablet and stored in Persepolis. The seals were purely used for identification and filing purposes. Vallat reconstructs the following process : *Farnaka-, the chief administrator, gives an order to PN_2 who communicates it (formula P). This **patigāma-* is both the oral order of *Farnaka- and the message communicated by PN_2. PN_3 translates it into Aramaic, of which a *tumme* is made and given to PN_1 (formula D) who writes an Elamite version on a tablet (formula T). His translation of the alternative formula *hi tupaka* PN *turnaš* is simply "on connaissait ceci par PN".

Whether Vallat's reconstruction is correct or not, the French scholar was certainly right when he paid attention on the Elamite syntaxis of the subscript.

In this respect the difference between the verbal forms is conspicuous : *lika*, *talliš*, *lišta* and *dušta*. The two latter forms have the suffix chain *-t-a*. On both suffixes there has been much discussion. The suffix *-a* has been described as subordinating (Grillot 1970 and 1973 ; Grillot-Susini & Roche 1987 : 25 and 40 ; Giovinazzo 1989b ; Steiner 1990 : 144 and 153 ; Vallat 1994 : 272), coordinating (Hallock 1959 : 5-6 and 1973b : 150-151) and expressing non-finiteness and semantic connection (McAlpin 1981 : 80 ; Khačikyan 1998 : 50-51). Stolper (2004 : 82) points to the fact that there are counterexamples for all proposals. The suffix *-t-* has been considered as an expression of finality/completeness (Hallock 1959 : 6-7 ; McAlpin 1981 : 71) or of pluperfect (Grillot 1970 : 217 ; Grillot-Susini & Roche 1987 : 33 ; ElW passim ; Vallat 1994 : 272)[28]. Khačikyan (1998 : 53) has noticed a historical development from a nominalizing clitic to a completeness or pluperfect marker. In any

27 Who also frequently appears in formula D, in texts without formula T.

28 Paper's idea (1955 : 49-50) that it is a relative should be discarded (Hinz 1950 : 284 ; Hallock 1959 : 6-7 ; Reiner 1969 : 96).

case most sentences with this suffix can be translated as verbal forms expressing anteriority (Stolper 2004 : 82).

This means that *talliš* is chronologically the latest stage, taking place after *lišta* and *tušta*. Accordingly Vallat's translation of the subscript is "PN_1 has registered (lit. "written") the order (lit. "message"), which PN_2 has communicated (lit. "given") after PN_1 had received the copy of PN_3".

Henkelman (2006 : 85-86) has criticized Vallat's vision. First of all, the status of Elamite would be nothing more than that of a translational language. Why would the Persians even bother to make Elamite copies? Secondly, if Vallat were right, 1,148 seals would be kept in Persepolis and only used for filing purposes. Yet the seals were applied according to various sealing protocols. Such a system would only burden the archiving system. Thirdly, if all Elamite texts were mere translations of Aramaic texts, one would have expected much more Aramaic loanwords in the Elamite texts.

Next to his criticism Henkelman also presents a new solution (2006 : 92-93) : the director's or vice-director's office issues an order in Aramaic. This may be a draft document or a copy for the director's archive. The order was transmitted to a scribe who made an Elamite copy of it. This means that *tumme* is the physical document, while **patigāma-* is the order written on it. After the writing and sealing of the Elamite text it was sent to the addressee and finally came back to Persepolis as a receipt after effectuation of the order. The Aramaic documents were kept in the director's archive. In Henkelman's view formula H simply means that "the document as we have it is the authorization itself and not its copy and that it was actually delivered to the addressee".

Henkelman's solution is not impossible, yet not without difficulties. First of all no single scholar mentions the Old Iranian aspect. High Persian officials like *Farnaka- and *Čiçavauš spoke Persian and not Aramaic or Elamite. They certainly dictated their orders in Persian, as is clearly shown by the initial phrases of the El. letter orders : PN *[appellative] turuš* PN *nan* KIMIN, "Tell PN, [appellative], PN spoke as follows" (Lewis 1977 : 10). Secondly the scholars were concentrated on the Elamite evidence. Only Lewis tried to involve the Aramaic evidence as well by making equivalents of *ṭʿm* and *tumme*. Accordingly it might be useful to have a closer look at the various formulas in their broader context, as similar subscripts are attested in Aramaic and demotic texts.

The two most frequent subscripts in Aramaic are PN *ydʿ ṭʿmʾ znh*, "PN is cognizant of this order" and PN *sprʾ*, "PN is the scribe". They occur in *TAD* A 6.8 : 4, 6.9 : 6, 6.10 : 10, 6.11 : 6, 6.12 : 3 and 6.13 : 5, which are all letters belonging to the so-called Arsames correspondence. All people cognizant of orders have Iranian names (*Bagasravah-, *Ṛtavahyah- and *Ṛtaxaya-). One scribe has an Iranian name (*Rāšta-), the other has an Egyptian name (Aḫpepi), but is only attested once.

A second formulaic note is found in *TAD* A 6.2, a letter from Arsames to Waḥpremaḥi in which Arsames gives his subordinate some instructions regarding the repair of a boat. The subscript here is *ʿNny sprʾ bʿl ṭʿm; Nbwʿqb ktb*, "Anani the scribe/*sepīru* drafted the order; Nabû-ʿaqab wrote". Here no Iranian names are involved. In all likelihood this formula is a variant of the formula discussed above. Accordingly the *bʿl ṭʿm* (lit. "master of the order"; cf. Akk. *bēl ṭēmi*) is the same as the person who "is cognizant of this order" (Porten 1968 : 55-56). He was the person who drafted the instructions on behalf of the king and was thus a high-ranked official, who was attached to the entourage of the satrap

or worked in the central royal administration. He was higher in rank than the scribe, but the latter was also a high official (Alexander 1978 : 166).

Interestingly the sentence "Nabû-ʿaqab wrote" is written by another hand than the rest of the letter. From this fact Grelot (1972 : 293) has deduced that not Nabû-ʿaqab, but Anani himself did write the letter and that the former was the person who delivered the letter to the chancellery. This is not convincing. Ancient Near Eastern languages have enough words for "messenger" and never confuse this person with a scribe[29]. It is more likely that Anani drafted and wrote the letter himself, which could be the reason why he is called both *spr'* and *bʿl ṭʿm*, while Nabû-ʿaqab probably made another copy.

In the Aramaic official letters two officials are involved : he who is cognizant of the order on the one hand and the scribe on the other hand. This is, however, not always the case. In a demotic letter (P. Berl. 13540) three persons, who play a role in the creation of the letter, are mentioned : (1) *Ṣṭbr* i.*rḫ pꜣy wꜣḫ* (2) *Pꜣy-f-ṭ ꜣw-ʿwy-ny.t pꜣr* i.i*r sḫ tꜣy šʿ.t* (3) *sḫ Wꜣḥ'b-rʿ*, "Satibara knows this order, Peftu'Neith is he who wrote this letter, Apries wrote". According to Hughes (1984 : 83-84 ; also Depauw 2006 : 164) the first person is the one who issued the order, the second person drafted the demotic version of the letter or translated the Aramaic version into demotic, while the third person was the Egyptian scribe who wrote the extant copy of the letter.

Interestingly *TAD* A 6.2 : 28 also mentions three officials : next to the Aramaic written by Anani and Nabû-ʿaqab there are two lines in demotic : *sš Sꜣ-sbk*, "Sasobek wrote" and *ꜥ byry*, "the boat". This indicates the existence of a demotic exemplar as well as an Aramaic exemplar of this letter order. The existence of a demotic exemplar points to the lack of knowledge of Aramaic by Waḥpremaḥi, the Egyptian addressee of the letter (Porten 1968 : 57).

It seems that the third official appears when there were demotic copies needed of a particular document. Of each official document there must have existed an Aramaic copy, because of its status as administrative language. In this way the process of creating an official document can be reconstructed as follows. A *bēl ṭēmi* passed the oral instructions from Arsames to the scribes, most likely in Persian, but possibly in Aramaic. A scribe (e.g., Rāšta-) translated the text in Aramaic and possibly a third person put it on papyrus. The existence of a third person, the writer himself, is proven by the fact that at least two different hands are involved in the letters "written" by Rāšta- (Alexander 1978 : 166), which means that *Rāšta- did not actually write/copy the texts himself. He only drafted them. The Aramaic documents omit the real writer's name.

If a demotic copy was asked for, an Egyptian scribe (e.g., Apries or Sasobek) made a demotic translation and wrote it down. Contrary to his Aramaic writing colleague his name was mentioned in the text.

29 As is shown by the following table :

Language	**scribe**	**messenger**
Akkadian	*sepīru*, *ṭupšarru*	*mār šipri*, etc.
Aramaic	*spr*	*mlʾk*
Egyptian	*sḫ*	*wpwty*
Old Iranian	**uštayama-*	**dūta-*, **harzapanta-*

The Aramaic and Egyptian evidence suggests that either Iranian-speaking people were trained in Aramaic in order to translate the oral Persian orders in written Aramaic or that Aramaic speaking people took an Iranian name in order to advance more rapidly into the Persian administration.

The appearance of El. *hi tupaka* PN *turnaš* is interesting since it can easily be connected to Ar. PN *ydʿ ṭʿm znh* (Hinz 1971 : 310-311) and demotic PN i.*rḫ pʾy wʾḥ*. As formula P (**patigāma* PN *lišta*) is situated on the same level as *hi tupaka* PN *turnaš* it also must be related to Dem. PN i.*rḫ pʾy wʾḥ* and Ar. PN *ydʿ ṭʿm znh*. Such a connection is enhanced by the fact that the personal names appearing in these formulas are all Iranian[30], except for one Elamite name and one Babylonian name attested in the Elamite documents (cf. *supra*). Moreover the person attested in the "*turnaš*-formula", Ir. *Varāza-, also appears 11 times in formula P.

All attested subscripts can now be brought together in one general synoptic table :

Aramaic	**Demotic**	**Elamite**
(1) PN_1 ydʿ ṭʿm znh (2) PN_1 bʿl ṭʿm	PN_1 i.rḫ pʾy wʾḥ	(1) hi tupaka PN_1 turnaš (2) *patigāma PN_1 lišta
PN_2 sprʾ	PN_2 pʾr i.ir sš tʾy šʿ.t	tumme PN_2-mar tušta
PN_3 ktb	sš PN_3	PN_3 talliš(ta)

In English translation

Aramaic	**Demotic**	**Elamite**
(1) PN_1 knows this order (2) PN_1 is the master of the order	PN_1 knows this order	(1) PN_1 knew about this (2) PN_1 delivered the order
PN_2 is the scribe	PN_2 is he who wrote this letter	PN_3 received the draft from PN_2
PN_3 wrote	PN_3 wrote	PN_3 wrote

From these data one can reconstruct the picture of how an order was created. This process follows three stages :

(1) An Iranian high official (*Farnaka-, Arsames, etc.) dictates an order (**patigāma-*) in Old Persian[31] to PN_1 (*bēl ṭēmi*), who is responsible for the correct effectuation of it ("he knows about it").

(2) PN_1 delivers the order to PN_2 (formula P), who makes an Aramaic translation and gives a draft (*tumme*) to PN_3 (formula D). Accordingly the *tumme* was written in Aramaic.

30 The names in the Aramaic documents are *Bagasrava-, *Ṛtavahyah- und *Ṛtaxaya-. The name in the demotic text is Sṭbr, an Iranian name the etymology and meaning of which is not certain (Tavernier 2002 : 110).

31 The fact that the Persian high officials did not know other languages is supported by (1) Amherst 258, which is discussed above and (2) Ezra 4,18 in which king Artaxerxes I says that a document was read before him in translation.

(3) PN_3 writes an Elamite or a demotic copy of the *tumme* (formula T).

Unfortunately this reconstruction does not completely explain the translational process. While it is sure that the transition from Old Persian to Aramaic is the responsibility of the *teppir/sepīru/spr*, it is not sure at which level the transition from Aramaic to Elamite or Egyptian should be situated. There are two possible scenarios :

(1) The *teppir/sepīru/spr* translates the Old Persian **patigāma-* in Aramaic and another language (e.g., Elamite or Egyptian). He also dictates the text to a scribe, who knows cuneiform (or demotic) and writes the text down.

(2) The *teppir/sepīru/spr* translates the Old Persian **patigāma-* in Aramaic and passes it to a scribe-interpreter who translates the Aramaic version in an Elamite or Egyptian version.

If the first possibility is right, then the *teppir/sepīru/spr* were multilingual people. If the second possibility is right, then they were bilingual. Or, in other words, the first possibility situates the translation at one level (*teppir/sepīru/spr*), while the second possibility situates the translations at two levels (*teppir/sepīru/spr* and scribe). If the second possibility is right then the distinction between the expressions *teppir/sepīru/spr* on the one hand and *talliš/ṭupšarru/ktb* on the other hand is purely graphical : the first one knows the Aramaic script while the second one only knows cuneiform.

Both possibilities explain why there are only two phrases in Aramaic. Assuming that all orders started from an oral Old Iranian version, the number of officials mentioned in the subscripts is the same as the number of languages involved. The Aramaic documents were most likely translated directly from Old Iranian. Two languages are used, two officials appear in the subscripts. The Egyptian and Elamite examples require three languages : Old Iranian, Aramaic and Egyptian/Elamite. In these documents three officials are mentioned. With this in mind, *TAD* A 6.2, is probably the Aramaic version of a document that was also written in Egyptian, but in this case the latter version was not preserved.

Sometimes people are mentioned in more than one formulaic group. *Kāmeča-, for instance, is mostly attested in formula P (Dar 17-27), but once he appears in D (Dar 17) and 11 times he occurs in formula T (Dar 17-20). This means that he was *bēl ṭēmi* and scribe at the same time and that he even knew Aramaic, which is why he was asked one time for a translation job. *Varāza- simultaneously (Dar 18-21) was *bēl ṭēmi* and translator.

That scribes could also function as *bēl ṭēmi* is paralleled in a Babylonian text. Dar. 451 clearly shows that it could fall to a *sepīru* to communicate an order of the king (McGinnis 1995 : 122) : PN *sepīr u kinattišu iqbū umma : Darišu* LUGAL *ṭēmu ištakan umma*, upon which follows the content of the instruction.

Hereby it is possible to find individuals who were bi- or multilingual in the Elamite documents : the persons named above knew Old Persian, Aramaic and Elamite and this alone helped them reach a high-rank position in the Achaemenid administration. Thanks to the endeavour of the officials to add subscripts to the letter orders we now have a fascinating look into the multilingual class that lived in Persepolis in the first century of Achaemenid rule.

It should be stressed that this process was only used when an Aramaic copy was needed. The Elamite Persepolis texts without these subscripts were most likely translated directly from Old Persian into Elamite. In other words, only if texts contain subscripts there were Aramaic originals of them (cf. 3.3).

Finally this study has revealed two major differences between the processes described in the Fortification Archive and in the Treasury Archive : (1) formula P disappears in the Treasury Archive and (2) more Iranian names than Babylonian ones are found in formula D in the Treasury Archive. These aspects may reflect two developments : (1) more and more Babylonians took an Iranian name or (2) more and more Iranians learned Aramaic and Elamite. In any case it seems reasonable to assume that formula P was absorbed by formula D : an Iranian high official gives an order to a scribe, who translates it and gives it to a scribe, who makes a copy of it.

3.3 The relation between Elamite and Aramaic in the Fortification archive

Hallock defined the question on the precise relation between Elamite and Aramaic within the framework of the archive as "essentially unanswerable" (1969 : 4), although Lewis (1994 : 28) believes there was not much intermingling between Aramaic and Elamite. According to Henkelman (2006 : 96) there are various groups of Aramaic documents : (1) the (vice-)director's archives, (2) the *viatica* of the travellers, (3) the Aramaic texts on clay tablets, (4) the Aramaic glosses on the Elamite tablets. His assumption (2006 : 94) that Aramaic originals only exist if reference to them is made in a colophon seems correct. The criterion may very well be that only orders coming directly from the (vice-)director's office had an Aramaic original. Other documents were directly drafted in Elamite (which may explain the lack of formulas P and D in texts belonging to other categories than H and T).

Apart from these text groups and the references to Babylonian scribes writing on parchment there are only incidental references to Aramaic documents : PF 0323, PF 1986 : 31-32 and PFa 27. Yet it is dangerous to draw general conclusions from these texts (as Brosius 2003 : 280 does, when she assumes that two copies, an Aramaic one and an Elamite one, of each document were made), since the relation between the Aramaic and the Elamite document are not clear with regard to these texts (Henkelman 2006 : 96 and n. 205).

The situation described above parallels the other archives discussed above. In Egypt the local archives contain documents drafted in Aramaic or Egyptian, depending on what ethnicity used the documents. Orders coming from the satrapal administration, however, were first drafted in Aramaic and then translated in Egyptian.

3.4 Graphic influences between Elamite and Aramaic

Contact between Aramaic and Elamite may also be spotted in some graphic aspects. These are found in the Aramaic Persepolis texts, which otherwise have no information on multilingualism. No subscripts occur in them. Still it can be shown that at least a couple of Aramaic texts were written by people whose native tongue was not Aramaic, but Elamite. This is indicated by some Aramaic spellings which seem influenced by Elamite orthography. Perhaps the clearest example is PF 1791 where the Aramaic gloss has a name Mšbd. This name must be identical with El. ^{HAL}Mi-iš-šá-ba(-ad)-da. Despite unconvincing attempts to reconstruct a name *Miçabāda-, "Mithra-hedge" (Hinz 1973 : 51 and 1975 : 164 ; Schmitt 1978 : 404) the Iranian name rendered by these spellings is *Miçapāta-, "given by Mithra". Yet the Aramaic spelling should in that case be Mspt (as in *TAD* A 6.15 : 1, 4, 7, 8, 11, 16 ; *TAD* D 6.7 Oc : 1, 6.7 Ic : 1 ; cf. Kornfeld 1978 : 108 ; Swiggers 1983 : 178-179)

or Mssšpt (as in ATNS 13 : 2). It seems as if the scribe has simply transliterated the Elamite spelling in Aramaic, with Mšbd as the result.

A second example is found in PFAT 161 : 2. If Dgrn is a rendering of *Dakarina-, then we are dealing here with an Elamite who had to write Aramaic. Elamite did not make a graphic distinction between voiced and voiceless stops, whereas Aramaic had such a distinction. The correct Aramaic spelling should be Dkrn. Other similar examples are : P'gd for *Bagāta- (PFAT 176 : 2 ; influenced by El. ^{HAL}Ba-ka$_4$-da) and Wng for *Vanaka- (PFAT 218 : 1).

Interesting is also the spelling 'Ršyn (for *Ṛšaina-), in which the aleph is graphically rendered by a Greek A (PFAT 261 : 1).

3.5 Old Persian alloglottography

Multilingualism in Persepolis was also dealt with by Gershevitch, when in 1979 he published his theory on Old Persian alloglottography. According to Gershevitch Achaemenid Elamite was not a real language, but a way to transmit Old Persian messages from one person to another. The basis for this idea is the way how Achaemenid Royal Inscriptions came into being (Gershevitch 1979 : 115-117) : the king dictated a text in Old Persian to scribes who immediately translated it mentally and wrote it down in Elamite. The Elamite text, which serves as Elamite version of the inscription, is then retranslated in Old Persian, which was read to the king who approved it. This system was extrapolated to all Elamite texts written in the Achaemenid period. Gershevitch reconstructed the following communication process (1979 : 117-121) : person A called a scribe and read out e.g., a letter in Old Persian. The scribe wrote it down in Elamite on a clay tablet which was sent to person B. After receiving the tablet person B summoned a scribe and let him read the text in Old Persian. In this way one did not need to be able to read or write in order to be literate[32]. As soon as Old Persian scribes learned Elamite they became literate.

As a result of this Elamite would simply consist of a collection of ideograms for Old Persian : e.g., ku-ud-da would not be an Elamite word, but an equivalent of Old Persian *utā*, "and" (Gershevitch 1979 : 132 and 157-168). Two objections, however, can be made against this assumption : ku-da appears in a clear context in an inscription of a high Elamite official (last quarter of the seventh century B.C.) and a spelling ku-ut-te is also four times attested in Achaemenid Elamite. One could also wonder whether ideograms do not require the determinative MEŠ in Elamite. This theory explains the occurrence of many Old Iranian loanwords in Elamite texts.

Gershevitch even assumes that already before the birth of the Achaemenid Empire Elamite was ideographically written Old Persian, when he argues (1979 : 139) that "the transition from Elamography to Aramaeography of Old Persian must have started from 539 on, when lots of Aramaic-writing scribes from Babylonia ended up in Persis herself". In this scenario the Iranian rulers used both Elamite and Aramaic as means to write Old Persian.

32 Gershevitch's expresses his visionary talent when he writes that "Electronics will soon see to it that our descendants enjoy the same advantage, pitying us for the cumbersome way in which we had to set about learning to read and write" (1979 : 118).

The importance of this theory for the study of multilingualism lies in the fact that the scribes had to be perfectly bilingual (Old Persian - Elamite and Old Persian - Aramaic) in order to perform their tasks.

Gershevitch's theory is not convincing, however. There are two objections to it : (1) there are indeed many Old Iranian loans in Elamite texts, but nearly no Iranian verbal forms occur in the Elamite texts. If Gershevitch's theory was right, one would expect many more of these verbal forms. (2) When Middle Iranian was written by means of Aramaic ideographs many Iranian endings are attached to these ideograms. This is not the case in the Elamite texts.

4 Conclusion

As is to be expected the Persepolis Fortification and Treasury Archives display a picture in which many languages are attested. First of all many work groups of different ethnic provenance are mentioned in various texts. This already implies the use of many languages. Secondly there are attestations of scribes writing other scripts than Elamite and of Aramaic documents. Thirdly and most visibly there are tablets written in Elamite, Aramaic, Babylonian, Phrygian and Greek. Clearly texts were translated from Aramaic to Elamite.

A study of the process following which an administrative order came into being has yielded some results in the way how the translations were done and who did them. The Old Persian director dictated an order in Old Persian, which was translated in Aramaic and in Elamite. The multilingual *teppir*, who in all likelihood had an equivalent position as the Akk. *sepīru*, played an important role in this process and was situated at the very spot where the various languages came into contact. It is, however, not clear yet whether the *teppir/sepīru* was bi- or multilingual.

The multilinguistic situation attested in the Elamite texts from Persepolis corresponds perfectly with the equivalent situation in the other parts of the Achaemenid Empire, the documents of which display the same picture as the Persepolis texts.

Other aspects of multilingualism may be some graphic aspects found in the unpublished Aramaic texts from Persepolis, but eventually the main source for multilingualism is the collection of subscripts found in various Elamite Fortification and Treasury texts. These subscripts allow the modern scholar to have a look in the translational processes occurring in sixth and fifth century Persepolis.

Table 1 : Scribes and administrative formulas in the Persepolis Fortification and Treasury Archives.

Scribe	Text	Cat.	Seal	Year	Formulas
Annukruš	NN 1689	P	16	Dar 22	P (*(H)uvanvanta-)
*Anzūka-	PF 0656	H	9	Dar 19	P (*(H)uvanvanta-)
	PF 1790	T	9	Dar 19	D (Nanâ-iddin), H, T
	PF 1795	T	9	Dar 19	P (*Varāza-)
	NN 0224	H	9	--	P (*(H)uvanvanta-)
	NN 1983	H	71	Dar 26	P (*Dātēna-)
	NN 3099[33]	T	9	Dar 19	P (*Varāza-)
*Aryavṛta-	NN 1507	T	71	Dar 15	P (Humpanunu)
*Bagabāduš	NN 1569	H	9	Dar 18	P (*(H)uvanvanta-)
*Bagābigna-	PF 1798	T	16	Dar 23	D (*Yauna-)
	PF 1802	T	16	Dar 22	D (Bēl-ittannu)
	NN 1895	H	9	Dar 22	P (*(H)uvanvanta-), H
*Babaguxša-	PF 0667	H	9	Dar 22	P (*(H)uvanvanta-), H
*Bagadušta-	NN 0268	C4	9	Dar 17	--
	NN 0719	C6	9	Dar 18	--
	NN 0768	C4	9	Dar 17	--
	NN 1186	C4	9	Dar 18	--
	NN 1759	C4	9	Dar 17	--
*Bagamkāma-	NN 0233	H	16	Dar 25	P (*(H)uvanvanta-)
*Bagapāta-	PT 58[34]	--	ST 2	Xer 20	D (Bagabuxša-), H
	PT 68	--	ST 8	Xer 20	D (Bagabuxša-), H
	PT 1963-15	--	--	Xer 20	D (Bagabuxša-), H
*Bagāupama-	PF 0247	D	9	--	--
*Bagaxaya-	PF 1805	T	16	Dar 23	D (Laqip)
	NN 0426	T	16	Dar 23	P (*(H)uvanvanta-)
	NN 0531	T	16	Dar 23	P (*(H)uvanvanta-)
	NN 0835	P	16	Dar 23	P (*(H)uvanvanta-), H
	NN 1000	H	16	Dar 23	--
	NN 1730	T	16	Dar 22	D (Ribaya), H
	NN 2061	C6	9	Dar 18	--
*Bānuka-	PF 0674	H	11	Dar 20	--
*Buxtēča-	PF 0666	H	9	Dar 22	P (*(H)uvanvanta-)
	PF 1853	T	1567[35]	Dar 28	P (*Vīrina-)

33 Published by Cameron (1942).

34 PT 59 too has the formula D (Bagabuxša-).

35 Seal of Aspačanah-, also used on NN 1359 and 2401.

	NN 0789	L2	9	Dar 18	--
*Buxtēna-	NN 1727	C6	71	Dar 15?	--
*Čakauka-	PF 0254	C2	71	Dar 24	--
Čišpiš[36]	PF 0665	H	16	Dar 23	P (*(H)uvanvanta-)
*Çǔtēča-	PF 1830	T	71	Dar 15	--
*Da[]iča-	NN 0769	C2	9	Dar 20	--
*Dahyuka-	PF 1809	T	16	Dar 23	P (*(H)uvanvanta-)
	NN 0974	T	16	Dar 23	D (*Yauna-)
	NN 1752	T	16	Dar 24	D (*Yauna-)
*Dāta-	PT 12	--	PTS 14	Xer 3	D (*ṣaka-]), H
*Dātavahyah-	PT 6	--	ST 33	Dar	K
	PT 7	--	ST 33	Dar	K
	PT 8	--	ST 33	Dar	K
*Dēθaka-	PT 27	--	ST 2	Xer 13	D (Akkušuna[37]), H
*Gṛdavīš	PF 0614	G	11	--	--
	PF 0670	H	83	Dar 18	D (Ribaya)
	PF 0671	H	83	Dar 18	D (Ribaya)
	PF 1812	T	83	Dar 17	D (*Kāmēča-)
	NN 0543	T	83	Dar 17	D (*Kapārša-)
	NN 0947	H	83	Dar 18?	D (Ribaya)
	NN 3061	H	83	Dar 18	D (Ribaya)
*Haθēbāduš	PT 31	--	ST 6	Xer 16	D (*Aura-), H
*Hindauka-	PF 0672	H	11	Dar 25	P (*Kāmēča-)
	PF 0673	H	83	Dar 18	D (Ribaya)
	PF 0675	H	11	Dar 22	D (Aplaya-)
	PF 0676	H	11	Dar 22	D (Aplaya-)
	PF 0677	H	11	Dar 23	--
	PF 0678	H	11	Dar 19	D (*Rēbīš)
	PF 1182	M	11	Dar 25	--
	PF 1813	T	11	Dar 22	P (*Kāmēča-), D (Itti-Bēl)
	PF 1814	T	11	Dar 22	P (*Kāmēča-), D (Itti-Bēl)
	PF 1815	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1816	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1817	T	11	--	P (*Kāmēča-), D (Itti-Bēl)
	PF 1818	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1819	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1820	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)

36 Hallock (1969 : 207) read [HAL]Hi-iš-be-iš, but a reading [HAL]Še-iš-be-iš is more likely (Stolper, pers. comm.).

37 *Halmi lika *Dēθaka- tallišta <tumme> Akkušunamar <lišta>.*

	PF 1821	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1822	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1823	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1824	T	11	Dar 24	P (*Kāmēča-), D (Itti-Bēl)
	PF 1825	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PF 1826	T	11	Dar 24	P (*Kāmēča-), D (Itti-Bēl)
	PF 1827	T	11	Dar 25	P (*Nitanya-), D (Barīk-Tameš)
	PF 1828	T	11	Dar 25	P (*Kāmēča-), D (Ribaya)
	PF 2069	T	11	Dar 23	P (*Kāmēča-)
	NN 0002	H	11	Dar 22	D (Aplaya-)
	NN 0087	T	11	Dar 25	P (*Nitanya-), D (Barīk-Tameš)
	NN 0088	H	11	Dar 20	D ([ ]-išlā)
	NN 0191	T	11	--	P ([ ]), D ([ ])
	NN 0259	T	--	--	P (*Kāmēča-), D (Itti-Bēl)
	NN 0333	T	11	--	P (*Kāmēča-), D (Itti-Bēl)
	NN 0349	T	11	--	P (*Kāmēča-), D (Itti-Bēl)
	NN 0495	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	NN 0561	K1	--	Dar 25	P (*Kāmēča-)
	NN 0685	G	--	Dar 27	P (*Kāmēča-)
	NN 0698	H	83	Dar 15	P (Ribaya)
	NN 0727[38]	T	9	Dar 20	D (Nanâ-iddin), H
	NN 0779	H	11	Dar 22	--
	NN 0939	T	11	Dar 22	P (*Kāmēča-), D (Taʿlaya[39])
	NN 0948	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	NN 1036	T	11	--	P (*Kāmēča-), D (Itti-Bēl)
	NN 1101	T	9	Dar 20	D (Nanâ-iddin), H
	NN 1190	T	83	Dar 18?	D (Nanâ-iddin)
	NN 1269	T	11	Dar 24	P (*Kāmēča-), D (Itti-Bēl)
	NN 1280	T	11	Dar 24	P (*Kāmēča-)
	NN 1368	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	NN 1369	T	11	Dar 20	P (*Kāmēča-)
	NN 1460	H	11	Dar 22	D (Aplaya-)
	NN 1463	H	11	Dar 21	D (Aplaya-)
	NN 1590	T	11	Dar 24	P (*Kāmēča-), D (*Aplaya)
	NN 1700	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	NN 1839	T	11	Dar 25	P (*Kāmēča-), D (Taʿlaya)

38 The recipient of this letter is *Hindauka- himself and his colleagues. According to Henkelman (pers. comm.) this seems to be an answer to a letter from *Hindauka- requesting rations for his workforce.

39 Aramaic name, derived from *taʿl*, "fox" (attested in NB Ta-al-la; cf. Zadok 1977 : 114).

	NN 1848	T	11	Dar 22	P (*Kāmēča-), H (*Vardāspa-)
	NN 1870	T	--	Dar 22	P (*Kāmēča-), D (Itti-Bēl)
	NN 1880	T	--	Dar 23	D (Ba[ ]ya)
	NN 2004	H	83	Dar 17	D (Ribaya)
	NN 2078	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	NN 2394	T	11	Dar 20+	P (*Kāmēča-), D (Itti-Bēl)
	NN 2535	T	11	Dar 22?	P (*Kāmēča-), D (Itti-Bēl)
	NN 2561	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	NN 3007	T	11	Dar 24	P (*Kāmēča-), D (Itti-Bēl)
	NN 3050	T	11	Dar 23	P (*Kāmēča-), D (Itti-Bēl)
	PT 1	--	ST 4	Dar 32	D (Marduka)
	PT 2[40]	--	ST 24	--	P (*Nitanya-)[41], D (Marduka)
	PT 3	--	ST 3	Dar 33	D (Itti-Bēl)
	PT 3a	--	ST 3	--	D (*Ṛtaxaya-)
	PT 9	--	ST 24	Dar 32	P (*Nitanya-), D (*Ṛtaxaya-)
*Hinduka-[42]	NN 2425	H	83	Dar 15	P (Ribaya)
Hiš[ ]mana	PF 1831	T	71	--	--
Hitehapi	PF 1803	T	16	Dar 23	P (*(H)uvanvanta-)
*(H)ukaufī-	NN 1255	T	9	Dar 23	D (*Yauna-)
*Humāya-	PF 0664	H	9	Dar 22	--
	PF 2068	T	16	Dar 22	D (Bēl-iddin)
	NN 0037	T	16	Dar 22	P (*(H)uvanvanta-)
*(H)un(i)yāka-	NN 0908	H	16	Dar 25	P (*(H)uvanvanta-)
	NN 1359	H	1567	Dar 28	--
Intapiza	PT 28	--	ST 16	Xer 15	D (Mušmardu[43])
*Kāma-	PT 14	--	PTS14	Xer 3	D ([ ])

40 Cf. Cameron (1965 : 187).

41 In the text, **Hindauka- tallišta *Nitanya liš tumme Mardukmar tušta* a formula P would lack **patigāma-* (*PN *patigāma- lis*), while a formula H would lack *halmi* (*PN halmi liš*). Nevertheless formula P is to be preferred for various reasons : (1) in PT 9 Nitanya occurs in formula P ; (2) in the formula H the verbal form is always the passive participle *lika*, while formula P mostly uses *lišta*, but sometimes has *liš* (e.g., in PF 666 : 11) ; (3) *Nitanya- is three times attested in relation with formula P (PF 1827 ; NN 0087) and once in relation with formula D (NN 2225) ; (4) Formula H is never used with a personal name.

42 Probably the same person as *Hindauka-.

43 This name is a bit problematic, although it is certainly not Iranian (*pace* Gershevitch 1969 : 209). Mayrhofer (1973 : 8.1194 ; also Delaunay 1976 : 20-21) connects it with Mišišmarduka (Mayrhofer 1973 : 8.1127), which he considers the Elamite rendering of Bab. Mušēzib-Marduk or Mušibši-Marduk.

*Kāmēča-	PF 0661	H	9	Dar 19	P (*(H)uvanvanta-)
	PF 1788	T	9	Dar 17	D (Nanâ-iddin)
	PF 1789	T	9	Dar 18	D (*Varāza-)
	NN 0425	T	9	Dar 18?	D (Nanâ-iddin)
	NN 0475	H	9	Dar 19	P (*(H)uvanvanta-)
	NN 0509	H	9	Dar 18	P (*(H)uvanvanta-)
	NN 1100	T	9	Dar 18?	D (Nanâ-iddin)
	NN 1509	T	9	Dar 19	D (*Varāza-)
	NN 2174	T	9	Dar 20	D (Nanâ-iddin)
	NN 3074	H	9	Dar 19	P (*(H)uvanvanta-)
	JNES 53 264	T	9	Dar 18	D (*Varāza-)
*Kāraka-	PT 1963-6	--	--	--	D (*Ṛtaxaya-)
*Karkiš	PF 0654	H	9	Dar 18	P (*(H)uvanvanta-)
	PF 0690	H	71	Dar 26	P (*Dātēna-)
	PF 1792	T	9	Dar 18	P (*Varāza-)
	PF 1793	T	9	Dar 19	P (*Varāza-), H
	NN 0254	T	9	--	P (*Varāza-), H
	NN 1127[44]	H	71	Dar 26	P (*Dātēna-)
	NN 1289	T	9	Dar 19?	P (*Varāza-), H
	NN 1352	T	9	Dar 18	P (*Varāza-)
	NN 1528	T	11	Dar 24	D ([ ]), H
	NN 1665	T	9	Dar 19	D (Nanâ-iddin), H
	NN 2515	T	9	Dar 19	P (*Varāza-)
	PT 22	--	ST 2	Xer 6	D (*Ṛtaxaya-)
*Kauf(i)ya-	PF 0659	H	9	Dar 19	P (*(H)uvanvanta-)
	NN 1717	H	9	Dar 18	P (*Vanuka-)
Kizzipuparra[45]	PF 0317	D	79	--	H
*Marya-	NN 0467	H	9	Dar 20	P (*(H)uvanvanta-)
*Mazdayašna-	NN 0299	T	83	Dar 18	--
*Miçanāfa-	PT 12a	--	PTS 14	--	D ([ ]), H
	PT 1963-8	--	--	Xer 6	D ([ ]), H
*Mṛduniya-	NN 0061	T	16	--	D (*Yauna-)
	NN 2529	T	16	Dar 24	D (*Yauna- and *Dātavahyah-), H
*Mūšaka-	PF 1794	T	9	Dar 20	D (Nanâ-iddin)
	NN 1202	T	9	Dar 18	D (*Varāza-)
	PT 13	--	ST 1	Xer 3	D (*Ṛtaxaya-)

44 Near-duplicate of PF 690.

45 According to Hinz and Koch (ElW 472; also Tavernier 2007a : 482 [5.3.2.87]) this is an Iranian name.

*Nāfuka-	NN 0961	H	16	--	P (*(H)uvanvanta-)
	NN 2165	T	16	Dar 23	D (*Yauna-), H
	NN 2536	T	16	Dar 24	D (*Yauna-), H
Nakankuya	NN 3009	H	16	Dar 23	P (*(H)uvanvanta-)
Napsuktaš	NN 2566	T	83	Dar 15	D (*Yauna-)
*Naryamanā	NN 0049	H	83	Dar 18	D (*Ribīš)
*Pāθaiča-	PF 0658	H	9	Dar 19	P (*(H)uvanvanta-)
*Piš(i)ya-	PF 0660	H	9	Dar 19	P (*(H)uvanvanta-)
Pururu	NN 0013	T	9	Dar 19	D (*Varāza-)
	NN 1147	H	9	Dar 22	P (*(H)uvanvanta-)
	NN 1740	P	9	Dar 22	P (*(H)uvanvanta-)
*Ṛtamiça-	NN 0241	H	9	Dar 18	P (*(H)uvanvanta-)
	NN 0458	T	9	Dar 18	D (*Varāza-)
	NN 1731	H	9	Dar 18	D (*Varāza-)
*Ṛtēna-	PF 0668	H	16	Dar 23	P (*(H)uvanvanta-)
	NN 0203	T	16	Dar 23	D (Laqip)
	NN 0847[46]	H	16	Dar 23	P (*(H)uvanvanta-)
	NN 1999	T	16	Dar 22	D (Ribaya), H
*Savanta-	PF 0669	H	16	Dar 23	P (*(H)uvanvanta-)
	PF 0689	H	71	Dar 26	P (*(H)uvanvanta-)
	PF 1799	T	16	Dar 24	D (*Yauna-), H
	PF 1800	T	16	Dar 24	D (*Yauna-), H
	PF 1801	T	16	Dar 21	P (*Varāza-), D (Ribaya), H
	PF 1804	T	16	Dar 23	P (*(H)uvanvanta-)
	NN 0161	T	9?	Dar 20	D (*Dātēna-)
	NN 0778	H	9	Dar 18	P (*(H)uvanvanta-)
	NN 1701	E	9	Dar 20	D (Puruna)
	NN 1775	T	9	Dar 21	D (Ribaya), H
	NN 2225	E	9	Dar 20	D (*Nitanya-)
Šakaz[ ]	NN 1034	T	83	Dar 17	D ([ ])
Šati-tutu	PF 1811	T	83	Dar 16	D (Nanâ-iddin)
*Taxmačiya-	PF 1806	T	16	Dar 23	D (*Yauna-)
	PF 1807	T	16	Dar 23	D (*Yauna-), H
	PF 1810	T	16	Dar 23	D (*Yauna-), H
	NN 1040	T	16	Dar 23	D (*Yauna-), H
	NN 1393	P	16	Dar 24	P (*(H)uvanvanta-)
	NN 1511	T	16	Dar 23	D (*Yauna-)
	NN 3029	T	9	Dar 20	D (Nanâ-iddin)
*Tīraya-	NN 0863	C2	9	Dar 17	--
	NN 1615	C6	71	Dar 24	--

46 Near-duplicate of PF 668.

Unini	PT 21	--	ST 2	Xer 4	D (*Yauna-)
*Upavanta-	PF 0655	H	9	Dar 18	P (*(H)uvanvanta-)
*Vankāma-	NN 0644	T	9	Dar 20	D (Nanâ-iddin)
*Varyakarša-	PF 0662	H	9	Dar 20	P (*(H)uvanvanta-)
*Vratēnta-	PT 15	--	ST 1	Xer 3	D (*Ṛtaxaya-)
	PT 16	--	ST 1	Xer 4	D (*Ṛtaxaya-)
	PT 18	--	ST 1	Xer 4	D (*Ṛtaxaya-), H
	PT 19	--	ST 1	Xer 4	D (*Hiθiš and *Haftiš)
	PT 1957-1	--	--	Xer 4	D (*Ṛtaxaya-)
*Xšaçabānuš	PF 0657	H	9	Dar 19	P (*(H)uvanvanta-)
	PF 1791	T	9	Dar 18	D (Nanâ-iddin)
	PF 1796	T	9	Dar 21	D (Ribaya), H
	PF 1797	T	9	Dar 21	D (Nanâ-iddin), H
	PF 2067	T	16	Dar 22	D (Bēl-iddin)
	NN 0709	H	9	Dar 21	P (*Bagabuxša-)
	NN 1078	H	9	Dar 21	D (*Varāza-), H
	NN 1847	T	9	Dar 20	D (Nanâ-iddin), H
	NN 2025	C4	9	Dar 19	P (*Varāza-), D (*Bujina-)
	NN 2156	H	9	Dar 19	P (*(H)uvanvanta-)
*Xšaθrauka-	NN 2279	T	83	--	P (*Varāza-)
*Xšayakata-	NN 2401	H	P136	Dar 28	--
*Zar[ ]tēna-	NN 2367	T	71	--	--
Zinuyapir	PF 1808	T	16	Dar 24	D (*Yauna-), H
[ ]išša[ ]	NN 0152	P	16	Dar 23	P (*(H)uvanvanta-)
[ ]ka	NN 1517	T	71	--	P (*Buxtēča-)
[ ]	NN 1093	T	83	Dar 17	P (*Kāmēča-), D (Nanâ-iddin)
	PT 1963-5	--	--	--	D (Itti-Bēl and *Ṛtaxaya-[47])
	PT 1963-20	--	--	--	D ([ ])

47 If my restoration ^{HAL}[ ] tal-li-iš-[da du-um-me] ^{HAL}Hi-ti-[be-ul a-ak ^{HAL}Ir-da]-ka_4-ia-mar d[u-iš] (PT 1963-5 : 20-23) is correct.

Bibliography

Alexander, P. S. 1978, "Remarks on Aramaic epistolography in the Persian period", *JSS* 23, p. 155-170.

Bongenaar, A. C. V. M. 1997, *The Neo-Babylonian Ebabbar Temple at Sippar : Its Administration and Its Prosopography* (PIHANS 80), Istanbul/Leiden.

Bradford Welles, C. 1963, *Diodorus Siculus, VIII : Books XVI, 66-95 and XVII* (LCL), Cambridge (MA), Harvard University Press.

Briant, P. 1996, *Histoire de l'empire perse. De Cyrus à Alexandre* (AchHist X), Leiden, NINO.

Brosius, M. 2003, "Reconstructing an Archive : Account and Journal Texts from Persepolis", in : M. Brosius (ed.), *Ancient Archives and Archival Traditions : Concepts of Record-Keeping in the Ancient World* (Oxford Studies in Ancient Documents 1), Oxford, p. 264-283.

Cameron, G. G. 1942, "Darius' daughter and the Persepolis inscriptions", *JNES* 1, p. 214-218.

Cameron, G. G. 1948, *Persepolis Treasury Tablets* (OIP 65), Chicago, The University of Chicago Press.

Cameron, G. G. 1965, "New Tablets from the Persepolis Treasury", *JNES* 24, p. 167-192.

Dandamayev, M. A. 1983, *Вавилонские писцы*, Moskva, Nauka.

Delaunay, J. A. 1976, "Remarques sur quelques noms de personne des archives élamites de Persépolis", *StIr* 5, p. 9-31.

Depauw, M. 2006, *The Demotic Letter : A Study of Epistolographic Scribal Traditions against their Intra- and Intercultural Background* (Demotische Studien 14), Sommerhausen, Zauzich.

D'jakonov, I. M. & Neroznak, V. P. 1985, *Phrygian* (Anatolian and Caucasian Studies), Delmar, Caravan.

Gershevitch, I. 1951-52, review of Cameron 1948, *Asia Major* 2, p. 132-144.

Gershevitch, I. 1979, "The Alloglottography of Old Persian", *TPS*, p. 114-190.

Giovinazzo, G. 1989, "Présence babylonienne dans les textes économiques de Persépolis", *AION* 49, p. 201-207.

Giovinazzo, G. 1989b, "L'expression '*ha duš ha duka*' dans les textes de Persépolis", *Akkadica* 63, p. 12-26.

Grelot, P. 1972, *Documents araméens d'Égypte* (Littératures anciennes du Proche-Orient 5), Paris, Les Éditions du Cerf.

Grillot, F. 1970, "À propos de la notion de subordination dans la syntaxe élamite", *JA* 258, p. 213-241.

Grillot, F. 1973, "La postposition génitive *-na* en élamite", *CDAFI* 3, p. 113-169.

Grillot-Susini, F. & Roche, C. 1987, *Éléments de grammaire élamite*, Paris, Éditions Recherche sur les Civilisations.

Hallock, R. T. 1950, "New light from Persepolis", *JNES* 9, p. 237-252.

Hallock, R. T. 1959, "The finite verb in Achaemenid Elamite", *JNES* 18, p. 1-19.

Hallock, R. T. 1969, *Persepolis Fortification Tablets* (OIP 92), Chicago, The University of Chicago Press.

Hallock, R. T. 1973a, "The Persepolis Fortification Archive", *Orientalia* N.S. 42, p. 320-323.

Hallock, R. T. 1973b, "On the Middle Elamite verb", *JNES* 32, p. 148-151.

Henkelman, W. F. M. 2006, *The other gods who are : studies in Elamite-Iranian acculturation based on the Persepolis Fortification texts*, Leiden [revised vision to appear as AchHist XIV, Leiden 2008].
Hinz, W. 1950, "Elamisches", *ArOr* 18, p. 282-306.
Hinz, W. 1971, "Achämenidische Hofverwaltung", *ZA* 61, p. 260-311.
Hinz, W. 1973, *Neue Wege im Altpersischen* (GOF III/1), Wiesbaden, Harassowitz.
Hinz, W. 1975, *Altiranisches Sprachgut der Nebenüberlieferungen* (GOF III/3), Wiesbaden, Harassowitz.
Hughes, G. R. 1984, "The So-called Pherendates Correspondence", in : H.-J. Thissen & K.-Th. Zauzich (edd.), *Grammata Demotika. Festschrift für Erich Lüddeckens zum 15. Juni 1983*, Würzburg, p. 75-86.
Khačikyan, M. 1998, *The Elamite language* (Documenta Asiana 4), Roma, Consiglio nazionale delle ricerche, Istituto per gli studi micenei ed egeo-anatolici.
Kornfeld, W. 1978, *Onomastica Aramaica aus Ägypten* (SÖAW 333), Wien, Österreichische Akademie der Wissenschaften.
Kümmel, H. M. 1979, *Familie, Beruf und Amt in spätbabylonischen Uruk : prosopographische Untersuchungen zu Berufsgruppen des 6. Jahrhunderts v. Chr. in Uruk* (Abhandlungen der Deutschen Orient-Gesellschaft 20), Berlin, Mann.
Lewis, D. 1977, *Sparta and Persia* (Cincinnati classical studies 1), Leiden, Brill.
Lewis, D. 1994, "The Persepolis Tablets : speech, seal and script", in : A. K. Bowman & G. Woolf (edd.), *Literacy and power in the Ancient World*, Cambridge, p. 17-32.
Lipiński, E. 1977, "Western Semites in Persepolis", *AAH* 25, p. 101-112.
Mayrhofer, M. 1973, *Onomastica Persepolitana : das altiranische Namengut der Persepolis-Tafelchen* (SÖAW 286), Wien, Österreichische Akademie der Wissenschaften.
McAlpin, D. 1981, *Proto-Elamo-Dravidian : The Evidence and its Implications* (TAPhS 71/3), Philadelphia, American Philosophical Society.
McEwan, G. J. P. 1981, *Priest and temple in hellenistic Babylonia* (FAOS 4), Wiesbaden, Steiner.
McGinnis, J. 1995, *Letter Orders from Sippar and the administration of the Ebabbara in the Late Babylonian Period*, Poznan, Bonami.
Paper, H. H. 1955, *The Phonology and Morphology of Royal Achaemenid Elamite*, Ann Arbor, University of Michigan Press.
Pearce, L. E. 1999, "Sepīru and ^{LÚ}A.BA : scribes of the late first millennium", in : K. Van Lerberghe & G. Voet (edd.), *Languages and cultures in contact : At the Crossroads of Civilizations in the Syro-Mesopotamian Realm* (OLA 96), Leuven, p. 355-368.
Porten, B. 1968, *The archives from Elephantine : The Life of an Ancient Jewish Military Colony*, Berkeley, University of California Press.
Porten, B. 1996, *The Elephantine Papyri in English : Three Millennia of Cross-cultural Continuity and Change* (Documenta et monumenta Orientis antiqui 22), Leiden, Brill.
Pugliese Caratelli, G. 1966, "Greek Inscriptions of the Middle East", *EW* 16, p. 31-36.
Reiner, E. 1969, "The Elamite Language", in : *Altkleinasiatische Sprachen* (HdO I/2/1-2/2. 54-118), Leiden, p. 54-118.
Schmitt, R. 1973, "Persepolitanisches IV", *KZ* 87, p. 16-21.
Schmitt, R. 1974, review of Hinz 1973, *GGA* 226, p. 94-113.

Schmitt, R. 1978, "Die theophoren Eigennamen mit altiranisch *Miθra-", in : *Études mithriaques : Actes du 2e Congrès International, Téhéran, du 1er au 8 septembre 1975* (Acta Iranica 17), Leiden, p. 395-455.

Schmitt, R. 2006, *Iranische Anthroponyme in den erhaltenen Resten von Ktesias' Werk* (Iranica Graeca Vetustiora 3 ; SÖAW 736), Wien, Österreichische Akademie der Wissenschaften.

Segal, J. B. 1983, *Aramaic Texts from North Saqqâra with some fragments in Phoenician* (Excavations at North Saqqâra. Documentary Series 4/Texts from Excavations 6), London, Egypt exploration society.

Spiegelberg, W. 1904, "Varia", *RT* 26, p. 41-52.

Steiner, G. 1990, "Sumerisch und elamisch : typologische Parallelen", *ASJ* 12, p. 143-176.

Stolper, M. W. 1984, "The Neo-Babylonian Text from the Persepolis Fortification", *JNES* 43, p. 299-310.

Stolper, M. W. 1985, *Entrepreneurs and Empire : The Murašû Archive, the Murašû Firm, and Persian Rule in Babylonia* (PIHANS 54), Istanbul, Nederlands historisch-archeologisch instituut.

Stolper, M. W. 2004, "Elamite", in : R. D. Woodard (ed.), *The Cambridge Encyclopedia of the World's Ancient Languages*, Cambridge, p. 60-94.

Stolper, M. W. & Tavernier, J. 2007, "From the Persepolis Fortification Archive Project, 1 : An Old Persian Administrative Tablet from the Persepolis Fortification", *ARTA* 2007.001 [http://www.achemenet.com/document/2007.001-Stolper-Tavernier.pdf].

Swiggers, P. 1983, "The name mspt in the Aramaic Documents from Egypt", *Aegyptus* 63, p. 177-179.

Tadmor, H. 1982, "The Aramization of Assyria : Aspects of Western Impact", in : H.-J. Nissen & J. Renger (edd.), *Mesopotamien und seine Nachbarn : Politische und kulturelle Wechselbeziehungen im Alten Vorderasiens vom 4. bis 1. Jahrtausend v. Chr. XXVe Rencontre assyriologique internationale, Berlin, 3. bis 7. Juli 1978* (Berliner Beiträge zum Vorderen Orient 1), Berlin, p. 449-470.

Tavernier, J. 2002, "Zu einigen iranischen Namen aus Ägypten", *Göttinger Miszellen* 186, p. 107-111.

Tavernier, J. 2007a, *Iranica in the Achaemenid period (*ca. *550-330 B.C.). Lexicon of Old Iranian proper names and loanwords, attested in non-Iranian texts* (OLA 158), Leuven, Peeters.

Tavernier, J. 2007b, "The case of Elamite *tep-/tip-* and Akkadian *ṭuppu*", *Iran* 44, p. 57-69.

Vallat, F. 1994, "Deux tablettes élamites de l'Université de Fribourg", *JNES* 53, p. 263-274.

Vallat, F. 1997, "L'utilisation des sceaux-cylindres dans l'archivage des lettres de Persépolis", in : R. Gyselen (ed.), *Sceaux d'Orient et leur emploi* (Res Orientales 10), Bures-sur-Yvette, p. 171-174.

Vittmann, G. 1998, *Der demotische Papyrus Rylands 9*, 2 vols. (ÄAT 38), Wiesbaden, Harassowitz.

Zadok, R. 1977, *On West Semites in Babylonia during the Chaldean and Achaemenian Periods : an onomastic study*, Tel Aviv, Tel Aviv University.